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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,016	12/12/2003	Dennis G. Koshinz	81006 7400	2333
22242	7590	07/10/2006	EXAMINER	
FITCH EVEN TABIN AND FLANNERY 120 SOUTH LA SALLE STREET SUITE 1600 CHICAGO, IL 60603-3406			KIANNI, KAVEH C	
			ART UNIT	PAPER NUMBER
			2883	

DATE MAILED: 07/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/735,016

Applicant(s)

KOSHINZ ET AL.

Examiner

Kianni C. Kaveh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

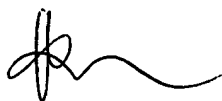
Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.



DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 9 recites the limitation 'the attenuation of light'-- in line 7 of claim 1 and line 8 of claim 9. There is insufficient antecedent basis for this limitation in the claim.

Correction is required.

Claims 1 and 9 are indefinite since the limitation 'grater than a fiber core of a similar optical fiber' is indefinite/ambiguous as it is not clear to which optical fiber the attenuation of claimed invention optical fiber, which has an angle other 45°, is compared with; whether the 'similar optical fiber' is the same optical fiber of claimed invention but having an angle of 40 degrees? or it is compared with another optical fiber other than that of claimed invention optical fiber. Correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshimura et al. (US 5999670).

Regarding claims 1-4, 7, 9-12 and 15, Yoshimura teaches a fiber optic device (shown in at least figures 14 and 36-38) comprising: an/plurality optical fiber(s) 124; a fiber core 45a within each of the optical fiber(s) having a fiber core cladding interface (shown in at least fig. 14, item 6 with core and cladding interface); and an angled polished end surface on the optical fiber (s) (see at least abstract, col. 2, lines 39-54; col. 3, lines 31-54; and see also at least examples 52-53 in col. 32-33), the polished end surface at an acute angle other than 45 degrees from a side of the fiber (shown in at least figures 22, 24, 25, 40 and 43; also see at least abstract, col. 2, lines 39-54; col. 3, lines 31-54; see also at least examples 52-53 in col. 32-33), wherein light entering the fiber core is attenuated (see at least example 39, 44 and 45; wherein light

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intensity reduction and/or light transmission loss is light attenuation); Yoshimura further teach an active device 43 operationally coupled to the optical fiber(s) such that light from the active device by the polished surface is reflected into the fiber core 45a; and wherein the active device is a surface emitting laser/diode (see at least col. 2, line 55).

However, Yoshimura does not specifically teaches the above light attenuation is greater than the attenuation of light entering a fiber core of a similar optical fiber having an angled polished surface of 45 degrees (the examiner does not give patentable weight to this limitation since this limitation is narrative in form in which 'light being attenuated grater than ...' since **it** is narrative in form in which light is not the means for doing something but being attenuated. In order to be given patentable weight, a functional recitation must be expressed as a "means" for performing the specified function, as set forth 35 U.S.C. 112,6th paragraph, and must be supported by recitation in the claim of sufficient structure to warrant the presence of the functional language. In re Fuller, 1929 C.D. 172; 388 0G. 279). Nevertheless, Yoshimura's as stated above teaches that light going through different angled fiber is attenuated and further teaches angles fiber with 45 degree shown in fig. 14-17 and further different angled fiber other than 45 degree shown in at least fig. 24 and 25. Therefore, it is obvious to those of ordinary skill in the art when the invention was made that since the structure of the optical fiber of Yoshimura and that of the Applicant are analogous thus they would function in the same manner with respect to reflectance and/or attenuation of light and since it has been held that where the general conditions

of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Yoshimura does not also specifically state that the above surface emitting laser/diode is a vertical cavity surface emitting laser and that the above desired angle is approximately 40 degrees. Nevertheless, Yoshimura also states such desired angle can be for example 44 degrees (see fig. 42, item angle 44 degrees) and/or 42.5 degrees (see at least example 37), and that the reflected light from the polished angle is smoothly with improved losses is transmitted through the fiber core (see at least col. 19, 2n-3rd parag.). Thus, it is obvious/well-known to those of ordinary skill in the art when the invention was made that 44 degree angle is a desired angle 'other than 45 degrees' and set a desired angle to any angle such as 40 degrees as desired and use a conventional vertical cavity emitting laser as a surface emitting laser, since such device with the angle would drastically reduce propagation loss with highly accurate transmission function (see col. 3 lines 45-60).

Regarding claims 5-6, 8, 12-14 and 16, Yoshimura further teaches wherein the polished end surface is at an angle between approximately 39 and 45 degrees from a side of the fiber (see fig, 42, item 44 degrees angle); wherein the polished end surface is at an angle between approximately 45 and 51 degrees from a side of the fiber (see fig, 39, item 46.5 degrees angle); wherein the polished end surface is at an angle sufficient to avoid saturation of an opto-electronic receiver (see col. 15, lines 41-62).

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Presently and Previously Cited Relevant Prior Art; Prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In accordance with MPEP 707.05 the following references are pertinent in rejection of this application since they provide substantially the same information disclosure as this patent does. These references are:

Novotny et al. 6751395

Kosemura 6330377 teaches claimed invention with angled end surface of fiber(s) in which light can be attenuated

Skinner et al. 20040120675 teaches claimed invention with angled end surface of fiber(s) in which light can be attenuated

Artjushenko et al. 5734765 teaches claimed invention

Bhagavatula et al. 6904197 teaches claimed invention

Tabuchi 5764832 teaches claimed invention

Miao et al. 20050053334 teaches at least claim 1 including Vertical Cavity Surface Emitting Laser

Chan et al. 20030235366 teaches at least claim 1 including Vertical Cavity Surface Emitting Laser

These references are cited herein to show the relevance of the apparatus/methods taught within these references as prior art.

Response to Arguments and Amendment

Applicant's argument filed on 3/30/06 have been fully considered but they are not persuasive.

In response to Applicant's comments on Yoshimura teachings on improved reflectance rather than concentrating the invention to have more loss per se the examiner states that improved transmission of light in a fiber is an important object in any invention but attenuation is not merely loss of light as Applicant indicates but reduction in its intensity or amplitude well known in the art, see listed prior art below, in which depending on particular applicant of the optical fiber the light can be attenuated

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such as the way Yoshimura does attenuated light in an optical fiber having different surface angles. Thus, to find a range of attenuation of light in which attenuation range is optimized discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233 also In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kianni C. Kaveh whose telephone number is 571-272-2417. The examiner can normally be reached on 9:30-19:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

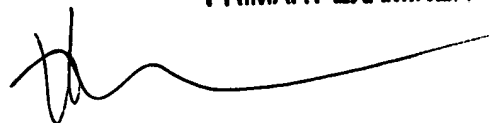
Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

K. Cyrus Kianni
Primary Patent Examiner
Group Art Unit 2883

KAVEH KIANNI
PRIMARY EXAMINER



June 28, 2006